

Application No. 10/754,163  
Amendment dated February 3, 2006  
Reply to Office Action of November 3, 2005

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1 1. (Currently Amended) A lifting apparatus (20) comprising:  
2 one of a mobile and stationary support structure or base (40; 42);  
3 a lift platform (30) having a geometric first center(32), the lift platform  
4 movable relative to the base from a lowered position to an upper position;  
5 a linkage (50) interconnecting the base and the lift platform for guiding the  
6 base and the lift platform to stay in a generally mutually parallel relationship as  
7 the lift platform moves relative to the base;  
8 ~~the base, lift platform and linkage configured so that when the lift platform~~  
9 ~~in its lowered position the first center intersects the base at a first point and with~~  
10 ~~the lift platform in its upper position the first center intersects the base at a~~  
11 ~~longitudinally off-set second point; and~~  
12 lift means, operatively mounted between the lift platform and the base, for  
13 controllably lifting and lowering the lift platform between the lowered and upper  
14 position, the lift means comprising a pneumatically inflatable device (60) having  
15 at least a first or lower member lower and an adjacent and operatively connected  
16 second or upper member, the inflatable members configured to move vertically  
17 and horizontally relatively to one another, and when in the lowered position the  
18 second or upper inflatable member is offset in a first direction relative to the first  
19 or lower inflatable member, and when in the upper position, the second or upper  
20 inflatable member is offset from the first or lower inflatable member in an  
21 opposite direction.

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1 2. (Canceled)

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1 3. (Canceled)

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1 4. (Currently Amended) The apparatus as defined in Claim 1 [[2]] wherein the  
2 inflatable device includes a top, having a top center, and a bottom, having a  
3 bottom center, wherein when the lift platform is lowered an axis extending  
4 through the top and bottom centers is off-set in one direction and with the lift  
5 platform in a raised condition the axis is off-set in an opposite longitudinal  
6 direction.

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1 5. (Currently Amended) The apparatus as defined in Claim 1 [[2]] wherein the  
2 pneumatically inflatable device includes an inflatable toroidally shaped first  
3 member (262a) and an inflatable toroidally shaped second member (262)  
4 mounted in fluid communication with the first member.

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1 6. (Currently Amended) The apparatus as defined in Claim 5 wherein the  
2 toroidal first and second members are configured so that when they are  
3 uninflated at least a portion of the second member fits within the first member  
4 while another portion of the second member extends beyond the first member, in  
5 the direction of the off-set and when the members are inflated, the second  
6 member is positioned atop the first member.

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1 7. (Original) The apparatus as defined in Claim 5 wherein a bottom (282) of the  
2 first member (262a) is secured to the base (42) and wherein a top (280) of the  
3 second member (262) is one of fixedly and slidably secured to the lift platform  
4 (30).

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1 8. (Original) The apparatus as define in Claim 5 wherein an axis which extends  
2 through the center of the inflatable second member is coincident with the first  
3 center of the lift platform.

1 9. (Currently Amended) The apparatus as define in Claim 5 wherein an axis  
2 which extends through the center of the inflatable ~~[[is]]~~ first member is  
3 longitudinally off-set relative to the second point.

1 10. (Original) The apparatus as defined in Claim 1 wherein the linkage (50),  
2 which guides the lift platform (50) relative to the base, includes a plurality of bars  
3 (152-158) each of which are rotatably mounted relative to the base and the lift  
4 platform and configured to operate in the manner of a parallelogram linkage.

1 11. (Original) The apparatus as defined in Claim 10 wherein  
2 a first bar extends from an upper first hinge located near a first end of  
3 a first side of the lift platform to a lower first hinge on the base,  
4 a second bar extends from an upper second hinge located near a  
5 second end of the first side of the lift platform to a lower second hinge on the  
6 base.

1 12. (Original) The apparatus as defined in Claim 11 wherein the linkage further  
2 includes:

3 a third bar extending from an upper third hinge located in between  
4 the first end and third end of the lift platform to a lower third hinge on the base,  
5 the upper first and third hinges and the lower first and third hinges configured to  
6 lie in a predetermined plane.

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1 13. (Original) The apparatus as defined in Claim 11 wherein the inflatable device  
2 is located in between the first and the second bars.

1 14. (Original) The apparatus as defined in Claim 11 wherein the inflatable device  
2 is located within a spaced defined by the range of movement of the first, second  
3 and third bars.

1 15. (Original) The apparatus as defined in Claim 12 wherein the linkage further  
2 includes:  
3 a fourth bar extending from an upper fourth hinge located in between the  
4 first end and fourth end of the lift platform to a lower fourth hinge on the base, the  
5 upper second and fourth hinges and the lower second and fourth hinges  
6 configured to lay in a predetermined plane.

1 16. (Original) The apparatus as defined in Claim 12 wherein the linkage further  
2 includes:  
3 a third bar extending from an upper third hinge, located spaced  
4 from an axis joining the first and second upper hinges, to a lower third hinge on  
5 the base, the first second and third upper first and third hinges and the lower first  
6 and third hinges configured to lay in a predetermined plane.

1 17. (Currently Amended) A lifting apparatus comprising:  
2 one of a mobile and stationary base;  
3 a lift platform having a geometric first center, the lift platform movable  
4 relative to the base from a lowered position to an upper position;

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5 a linkage interconnecting the base and the lift platform for guiding the  
6 base and the lift platform to stay in a generally mutually parallel relationship as  
7 the lift platform moves relative to the base;

8 a pneumatically inflatable device having a flexible and laterally  
9 displaceable side wall, the inflatable device configured so one of its top, side,  
10 axis and wall(s) is one of a) off-set in one direction from its bottom with the lift  
11 platform lowered and b) off-set in another direction with the lift platform raised  
12 ~~straight raised and lowered or offset in either direction raised and lowered.~~

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1 18. (Original) The apparatus as defined in Claim 17 wherein the inflatable device  
2 operates directly on the platform and the base.

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1 19. (Currently Amended) The apparatus as defined in Claim 17 wherein the  
2 pneumatically inflatable device includes only two inflatable portions, the first  
3 inflatable portion being a an-inflatable-toroidally shaped first member and the  
4 second inflatable portion being a an-inflatable-toroidally shaped second member  
5 mounted to the first member.

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1 20. (Currently Amended) The apparatus as defined in Claim 19 wherein the first  
2 and second members are configured so that when uninflated, at least a portion of  
3 the second member fits within the first member while another portion of the  
4 second member extends beyond the first member, in the direction of the off-set  
5 and when the members are inflated, the second member is positioned generally  
6 atop the first member.

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1 21. (Original) The apparatus as defined in Claim 19 wherein a bottom of the first  
2 member is secured to the base and wherein a top of the second member is one  
3 of fixedly and slidably secured to the lift platform.

1 22. (Currently Amended) The apparatus as defined in Claim 17 wherein the  
2 linkage is configured as a parallelogram linkage and hinged to an underside of  
3 the lift platform.

1 23. (Original) The apparatus as defined in Claim 17 wherein the linkage is  
2 configured as one of a two, three and four bar parallel configured linkage.

1 24. (Currently Amended) A lifting apparatus comprising:  
2 one of a mobile and stationary base;  
3 a lift platform movable relative to the base from a lowered position to an  
4 upper position;  
5 a linkage interconnecting the base and the lift platform for guiding the  
6 base and the lift platform to stay in a generally mutually parallel relationship as  
7 the lift platform moves relative to the base;  
8 an air spring mechanism mounted below the lift platform and to exert a  
9 force thereon to controllably raise and lower the platform between a lowered and  
10 a raised position, the air spring configured as an inflatable chamber formed by  
11 two inflatable members, an upper and a lower annular inflatable member  
12 operatively connected together, the upper and lower inflatable members each  
13 configured to be in a deflated condition when the platform is in a lowered position  
14 with the upper member collapse and off-set in at least one dimension relative the  
15 lower member. configured so that the platform is moved vertically by the same  
16 amount the air spring height changes.

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1 25. (Original) The apparatus as defined in Claim 24 wherein the air spring  
2 includes a pneumatically inflatable device (60) having a flexible and laterally  
3 displaceable side wall(s) (266).

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1 26. (Original) The apparatus as defined in Claim 24 wherein the air spring means  
2 includes a pneumatically inflatable device having a laterally displaceable side  
3 wall which moves longitudinally in concert with the movement of the lift platform.

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1 27. (Original) The apparatus as defined in Claim 25 wherein the air spring device  
2 includes a top, having a top center, and a bottom, having a bottom center,  
3 wherein when the lift platform is lowered an axis extending through the top and  
4 bottom centers is off-set in one direction and with the lift platform in a raised  
5 condition the axis is off-set in an opposite longitudinal direction..

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1 28. (Canceled)

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1 29. (Currently Amended) The apparatus as defined in Claim 24-28 wherein the  
2 toroidal first and second members are configured so that when they are  
3 uninflated at least a portion of the second member fits within the first member  
4 while another portion of the second member extends beyond the first member, in  
5 the direction of the off-set and when the members are inflated, the second  
6 member is positioned atop the first member.

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1 30.(New) The apparatus as defined in Claim 10 wherein those bars that are  
2 rotationally mounted to the lift platform pivot about two spaced axes, and wherein

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3 each of the axes are off-set to a side of an axis that extends through the  
4 geometric center of the lift platform.

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1 31.(New) The apparatus as defined in Claim 1 wherein the lift platform  
2 comprises a plurality of tubes configured to form opposing sides and opposing  
3 ends of the lift platform.

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1 32.(New) The apparatus as defined in Claim 31 further including a plate  
2 positioned upon the tubes.

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